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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/329,487	06/10/1999	MITCHEL KRISS	29284/35302	8147

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EXAMINER

NORMAN, MARC E

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/329,487

Applicant(s)

KRISS ET AL.

Examiner

Marc E. Norman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-11,14-16,22-37 and 39-49 is/are rejected.
- 7) ☒ Claim(s) 7,8,12,13,17-21 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: 37 CFR 1.105 requirement.

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DETAILED ACTION

Applicant filed an Appeal Brief (paper #9) on 8 April 2002 in response to Final Rejection (paper #6). In response to the Appeal brief, prosecution of the case has been reopened, and a new non-final rejection based on new art is set forth below. Requirements under 37 C.F.R. 1.105 are also set forth below.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 9-11, 13-16, and 22-49 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 44-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 44-49 recite method claims, which are dependent from apparatus claim 43. A method claim may not depend from an apparatus claim.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 9-11, 14-16, 22-36, 39-44, 48, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando in view of WISC.

As per claim 1, Ando discloses a method of estimating purchases (i.e. sales amount) made by customers of a supplier of interest (sample shop) from other suppliers (plural shops), the method comprising:

- collecting sample data regarding purchases (sales) at the supplier of interest (sample shop) and regarding purchases (sales) at other suppliers (plural shops) (see column 1, lines 31-38);
- determining a relationship between the purchases made from the supplier of interest and the purchases made from the other suppliers (column 1, lines 35-37 regarding “the sales amount ratio in the sample shop to the sales amount in all shops...”);

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- reading customer data regarding purchases made by the customers from the supplier of interest (column 1, line 35 regarding the sales amount in the sample shop); and
- based upon the customer data and the relationship, estimating the purchases made by the customers from the other suppliers (column 1, line 34 regarding determining the sales amount in all shops.

Ando does not specifically teach the sample data being panelist data from a subset of the customers of the supplier of interest (i.e., the sample shop).

WISC (Wisconsin Innovation Service Center) teaches a method of customer assessment for understanding a company's position relative to competitors from the customer's perspective (page 5) including collecting panelist data (see bottom of page 7 regarding interviewing 30 Verdi customers) regarding purchases made from the supplier of interest (see top of page 8: "What trusses do you currently purchase from Verdi?") and from the other suppliers (top of page 8: "What other companies do you purchase similar trusses from?"), wherein the panelists are a subset of customers of the supplier of interest. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the panelist data gathering step of WISC with the sales estimation method of Ando for the purpose of providing the base data for determining the relationship between the purchases made from the supplier of interest and the purchases made from the other suppliers, since Ando already makes use of such a relationship and since the panelist data of WISC clearly provides the basic information for determining such a relationship. (Regarding the date of the WISC reference, the Examiner notes that the confidential disclosure agreement for such analysis has a copyright date of 1980, and a revision date of February 1997 (see page 11). Note also the Manufacturing News reference, dated 1

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November 1996, which indicates that WISC was, at that time, performing such analyses regarding competitive intensities.)

As per claims 2-6, the rejections based on official notice set forth in the original office action (paper #4) are carried forward and maintained. In the appeal brief, Applicant argued that these rejections were inappropriate because they were not directed to the specific data (i.e., sales from competitors to customers of the supplier of interest), and further that just because the steps recited are well known activities, it would not necessarily be obvious to apply them to the specific case at hand. The Examiner submits that any issue regarding the specific data has been overcome in view of the new rejection of claim 1 based on Ando and WISC. Further, the Examiner submits that aggregating panelist/customer data according to categories (claim 2); defining purchases in terms of dollars spent (claim 3); unrotated principal factor analysis (claim 5); and predictor variables (claim 6) are all common and well established statistical techniques. Simply applying them to a specific type of data does not render these techniques patentably significant. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context. Regarding claim 4, it is further noted that Ando does teach data including the share (i.e., relative sales) from the supplier of interest and from the competition (column 1, lines 36-38).

As per claim 9, the Examiner submits that the claim simply labels the variables F_1 through F_i , without providing any context within the claim as to what the labels F_1 and F_i refer. The examiner reiterates that simply labeling variables is not, in itself, patently significant.

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As per claims 10 and 11, Applicant is referred back to the original Office Action, where it was shown that the squaring of predictor variables and products of predictor values are well known (as illustrated by Pyndick). Again, Applicant has not provided any context within the claim as to what F_1 and F_i refer. Further, as discussed above regarding claims 2-3 and 6, simply applying these techniques to a specific type of data does not render these techniques patently significant. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 14, Ando does teach sales amount (i.e. dollars spent) being an input (i.e., predictor) variable sales amount. The concept of a category is broad and, absent further details, is not in itself patently significant. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 15, it is noted again that the squaring of predictor variables and products of predictor values are well known (as was illustrated by Pyndick). While the prior art does not specifically teach the predictor variables including the square of the total number of dollars, the Examiner once again asserts that this is also simply a specific application of well known technique. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 16, as discussed in the original Office Action, determining criterion variables is well known and common technique in economic forecasting. Absent any further

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details regarding the criterion variables, and given the fact that the claim provides no guidance as to how the criterion variables are actually applied, the determining of criterion variables in and of itself does not render the claim patentable over the cited prior art. While the prior art does not specifically teach criterion variables being based on aggregated panelist data or aggregated customer data, the Examiner once again asserts that this is also simply a specific application of well known technique. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 22, see discussion of similar claim 5, above.

As per claim 23, see discussion of similar claim 6, above.

As per claim 24, see discussion of similar claim 16, above.

As per claims 25 and 26, the Examiner reiterates the argument of the original Office Action that performing a linear regression based on predictor variables and criterion variables is simply a basic and common activity of econometric analysis (as was demonstrated by Pyndick et al.). Regarding the fact that the relationship is used to estimate purchases made by the customer from other suppliers, the motivation for such a calculation has already been discussed above regarding claim 1. Again, simply applying these techniques to a specific type of data does not render these techniques patently significant. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 27, see discussion of similar claim 5, above.

As per claims 28 and 29, see discussion of similar claims 25 and 26, above.

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As per claim 30, see discussion of claim 1 above, which includes each of the recited steps of claim 30.

As per claim 31, see discussion of similar claim 2, above.

As per claim 32, see discussion of similar claim 5, above.

As per claim 33, see discussion of similar claim 6, above.

As per claim 34, see discussion of similar claim 25, above.

As per claim 35, the claim is rejected based on the discussion of claim 1 and of claim 25 regarding performing linear regressions.

As per claim 36, see discussion of similar claim 5, above.

As per claims 39, see discussion above of claim 1. It is further noted that the sales ratio disclosed by Ando is a form of linear relationship between purchases between sales/purchases from the supplier of interest (sample store) and the other suppliers (all shops).

As per claims 40-42, the various limitations recited have already been discussed with regard to claim 1.

As per claim 43, see discussion of claim 1, above. Claim 43 simply presents certain limitations of claim 1 in means plus function language.

As per claim 44, see discussion of similar claim 5.

As per claims 48 and 49, these limitations regarding determining a linear relationship and estimating purchases are discussed above regarding claim 39 and claim 1.

Claims 37 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando in view of WISC, and further in views of Besser.

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As per claims 37 and 45, neither Ando, WISC, nor Applicant's admitted prior art discloses creating a linear equation based on results from the unrotated principal components factor analysis. Besser teaches performing regression analysis (i.e., creating a linear equation) based on unrotated principal component analysis (see page 5, 1st-3rd full paragraphs). Since the claim, as written, provides no indication as to the particulars of the equation, or how it is applied, it would have been obvious to perform regression analysis on the data for the general purpose of determining relationships among variables. Applicant has not provided any reason, other than the fact that the current case is a specific application of these well-known techniques, that these techniques are novel in the present context.

As per claim 46, as discussed with regard to claim 39, the sales ratio disclosed by Ando is a form of linear relationship between purchases between sales/purchases from the supplier of interest (sample store) and the other suppliers (all shops).

As per claim 47, see discussion of claim 1 regarding estimating the purchases by the customers from the other suppliers based upon the purchases from the supplier of interest (sample store) and upon the linear ratio.

Requirement under 37 C.F.R. 1.105

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

The information is required to extend the domain of search for prior art. Limited amounts of art related to the claimed subject matter are available within the Office, and are

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generally found in class 705 and subclasses 7 and 10, which describe operations research, market analysis, respectively. A broader range of art to search is necessary to establish the level of knowledge of those of ordinary skill in the claimed subject matter of determining the amount of purchases a supplier's customers are making from the supplier's competition. The information is further required in order to identify products and services embodying the disclosed subject matter and to identify the properties of similar products and services found in the prior art.

In response to this requirement, please provide the names of any products or services that have incorporated the claimed subject matter.

In response to this requirement, please state whether any search of prior art was performed. If a search was performed, please state the citation for each prior art collection searched. If any art retrieved from the search was considered relevant to demonstrating the knowledge of a person having ordinary skill in the art to the disclosed purchase estimating method, please provide the citation for each piece of art considered and a copy of the art.

The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.

This requirement is an attachment of the enclosed Office action. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Conclusion

This office action has an attached requirement for information under 37 C.F.R. 1.105. A complete response to this Office action must include a complete response to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fulgoni et al. discloses systems and methods for collecting consumer data.

Hallowell discloses an empirical study of customer loyalty and profitability.

Mallay provides a practical guide to competitor intelligence.

Biong provides an analysis of loyalty to suppliers within the grocery trade.

Youssef et al. provides a model of supplier selection in an advanced manufacturing technology environment.

Sirohi et al. provides a model store loyalty for a supermarket retailer.

Goodwin et al. provides a discussion of customer loyalty.

Appiah-Adu provides a discussion of marketing effectiveness and customer retention in the service sector.

Malhotra provides an overview of competitive intelligence programs.

Attaway provides a review of issues related to competitive intelligence.

Luecal provides a discussion of competitive intelligence in the context of the electric utility industry.

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Chain Store Age discusses the use of a panel database to determine sales information about competitors.


Bloom et al. teaches combining historical data with information from interviewing clients to develop spending forecasts (page 9).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc E. Norman whose telephone number is 703-305-2711. The examiner can normally be reached on Mon.-Fri., 8:00-5:30, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on 703-308-2597. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

MN
August 8, 2002


Marc Norman
Patent Examiner
Art Unit 3744